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General Headquarters, Washington, D. C.

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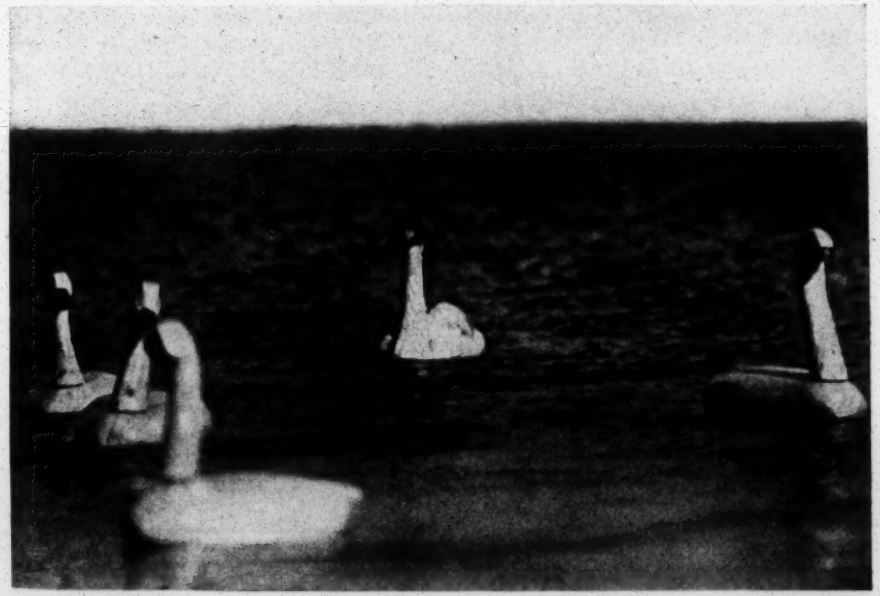

Photograph by George Shiras, 3d

WHICH IS REAL AND WHICH DECOY?

A young whistling swan (center) is lured within range of the camera on Currituck Sound, North Carolina, by some wooden images of itself, which the swan considered so clumsy that it pecked each of them vigorously on the head with its beak. The whistling swan, once threatened with extinction, is increasing in numbers as a result of rigid protective laws (see Bulletin No. 3).

HOW TEACHERS MAY OBTAIN THE BULLETINS

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Helium To Lift New Stratosphere Balloon

HELIUM gas will be used for the first time in a stratosphere flight next June when the new expedition of the National Geographic Society and the Army Air Corps takes off near Rapid City, South Dakota.

The balloon to be used for the 1935 flight will be larger even than that of last year. It will have a capacity of 3,700,000 cubic feet, an increase of 700,000 cubic feet over that of the 1934 bag.

These announcements were made by Dr. Gilbert Grosvenor, President of the National Geographic Society, following a meeting of the Scientific Advisory Committee for the flight. Heretofore hydrogen gas has been used in all balloon ascents into the upper atmosphere.

Eliminates Several Dangers

The use of helium will make possible a method of handling the balloon that will eliminate all danger of injuries to the bag from torn fabric and explosion, such as those suffered by the hydrogen balloon, "Explorer," sent aloft under the same auspices last July.

Helium is non-explosive, either alone or mixed with air. It will not be necessary, therefore, that the fabric of the bag be folded to exclude air when the balloon leaves the ground; the bag, instead, will have helium in its top and air in its lower portion, and will be loosely extended.

When the balloon reaches high altitudes, the expansion of the helium in the top will force the air out through an opening in the bottom, and the bag will then be completely full of helium. This procedure has been followed successfully even with hydrogen in the three flights made by the Piccards, but there is always danger of explosion from a mixture of hydrogen and air. With helium an explosion is impossible.

The new balloon bag, on which work is now under way at the Goodyear-Zeppelin Company plant in Akron, Ohio, will have a top of 33 per cent stronger fabric, and a bottom of 50 per cent stronger fabric than that used in last year's balloon. It is because of the increased weight of the stronger fabrics, and the fact that helium has only about nine-tenths the lifting power of hydrogen, that the new balloon is being made larger.

The increase of about 20 per cent in gas capacity will give the helium-filled bag about the same theoretical "ceiling" as the hydrogen bag used last July—some 75,000 feet above sea level, or between 14 and 15 miles.

Stevens and Anderson Are "Crew"

Captain Albert W. Stevens will be in command of the flight next June and in charge of the scientific work. The balloon will be piloted by Captain Orvil A. Anderson. Each took part in last year's flight. Captain Randolph P. Williams will be in charge of the ground work.

The Scientific Advisory Committee for the flight and the flight personnel have checked with balloon experts on the design of the balloon, and are working out detailed plans for instruments and the scientific projects to be carried out aloft. Dr. Lyman J. Briggs, Director of the U. S. Bureau of Standards, is chairman of the committee.

Other members of the committee are:

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Photograph by George Shiras, 3d

LOUD CRIES AND THE BEAT OF WINGS FOLLOW AN ALARM

A remarkable action photograph taken with a high-speed camera on the Louisiana duck marshes. The picture clearly reveals the flight tactics of such shallow-water ducks as the mallard, black duck, and pintail, which can rise almost straight up from the water (see Bulletin No. 3).

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Oshima, Natural Lighthouse for Bay of Tokyo

MOUNT MIHARA, on the Japanese island of Oshima, has long been noted as a guide to mariners. An active volcano, its lofty summit belches forth a rolling pillar of white steam by day and a pillar of pink fire, or rather reflected glare, at night.

But recently Mihara has been coming into the news as a "suicide peak." Twice within the past month groups of three Japanese young men have leaped into its flaming crater, and last year several suicides were prevented only through the vigilance of police stationed along the rim.

Residents of villages around the volcano believe that the God of Death has taken up his abode in the crater, and is luring people to their doom. Japanese authorities, less superstitious, are taking steps, however, to restore the peak to its more useful, if less sensational, rôle of guiding ships.

Oshima Is a Popular Name

If you attempt to find the island of Oshima on a large-scale map, or in the index of a guide to Japan, you may get into difficulties. Oshima seems to be a popular name in Japan, because there is a group of Oshima islands off the southern coast of the main group of Japanese islands; another Oshima juts out of the sea a short distance west of the southern point of Hokkaido; and a third lies off the Japanese coast south of Kobe.

To confuse an invading fleet, perhaps, the southernmost district of Hokkaido Island is also called Oshima, and Oshima might easily be mistaken for Okishima, or any of the other similarly named islands and islets of Nippon.

The Oshima mentioned in the recent dispatches, to be precise, is the northernmost island of the Izu group, a string of islands, like the tail of a kite, that extends almost due south from Tokyo Wan or Bay. Oshima lies 30 miles off Tokyo in the same latitude as Memphis, Tennessee.

All of the seven main islands of the Izu group are of volcanic origin, but Oshima possesses the only active crater. Mihara, rising 2,500 feet in the center of the island, has a crater which is a quarter of a mile in diameter. By day it emits a huge volume of pure white steam, and after dark this whirling mass reflects the pink glow of the boiling cauldron beneath it. In clear weather it is a better guide to mariners than the most powerful lighthouse.

Island Has 7,900 Residents

Oshima owes its existence to Mihara. The lava-covered, oval-shaped island is but nine miles in circumference. In most places it slopes gradually from the Mihara crater to the blue Pacific, but, on its northwestern point, layer upon layer of lava has formed a bluff more than half as high as the Washington Monument, below which waves crash unceasingly.

Amid rumbles from the boiling cauldron above them, more than 7,900 inhabitants are occupied in forestry, fishing and farming on Oshima, while a few are employed in the administration of the Isles of Izu. Motomura, on the north side of the island, is the principal village and anchorage for visiting steamers.

Habu, on the southeastern side, facing a small bay formed in the sunken crater of an extinct volcano, is a favorite anchorage for picturesque junks which ply between the Izu Isles and the mainland.

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Dr. Gilbert Grosvenor, President, National Geographic Society; Brigadier General Oscar Westover, Assistant Chief, U. S. Army Air Corps; Dr. Frederick V. Coville, Chairman, Research Committee, National Geographic Society; Dr. W. F. G. Swann, Director, Bartol Research Foundation; Captain R. S. Patton, Director, U. S. Coast and Geodetic Survey; Mr. Willis R. Gregg, Chief, U. S. Weather Bureau; Dr. Floyd K. Richtmyer, Cornell University, and Research Council, National Academy of Sciences; Dr. L. B. Tuckerman, National Bureau of Standards; Dr. Charles E. K. Mees, Director Research Laboratory, Eastman Kodak Company; Dr. John Oliver La Gorce, Vice-President, National Geographic Society; and Mr. Thomas W. McKnew, National Geographic Society, Secretary to the Committee.

Note: Students wishing additional timely information about this new field for exploration, the stratosphere, and about helium, should also consult: "The Society Announces New Stratosphere Flight," *National Geographic Magazine,* February, 1935; "Exploring in the Stratosphere," October, 1934; "World's Largest Free Balloon To Explore Stratosphere," July, 1934; "The Geographic's Stratosphere Expedition," April, 1934; "Ballooning in the Stratosphere," March, 1933; "So Big Texas," June, 1928; "Exploring the Earth's Stratosphere," December, 1926; "Seeing America from the *Shenandoah,*" January, 1925; and "Helium, the New Balloon Gas," May, 1919.

See also in the GEOGRAPHIC NEWS BULLETINS: "Stratosphere Flight Yields Valuable Data," week of October 1, 1934; and "To Repeat Stratosphere Flight from Black Hills," week of January 7, 1935.

Bulletin No. 1, February 4, 1935.

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NEXT SUMMER THE "NO SMOKING" SIGN WON'T BE NEEDED

Hydrogen surging from steel cylinders through snakelike canvas tubes to the huge bag of the National Geographic Society-Army Air Corps Stratosphere balloon "Explorer" last July, just before the ascent from the Black Hills of South Dakota. Hydrogen is highly explosive when mixed with air or oxygen, hence the warning signs. For the flight this year, under the same auspices, non-inflammable helium gas will be used to inflate the big gas bag.

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Seek Closed Season on All Migratory Waterfowl

THE National Association of Audubon Societies has opened a campaign to prohibit the shooting of migratory waterfowl in 1935 in order to save a number of different types of birds which, it is believed, are faced with extinction if not granted more protection than existing laws provide for them.

If the proposals of the Audubon Societies are adopted, the rest of the year may be a "closed season" to all except those who "hunt" with a camera.

While duck shooting is one of the causes of our failing duck supply, it must not be considered the only reason for remedial action. The chief enemies of our migrating ducks, swans, and geese may be classified under the following heads:

Shooting, predatory animals and natural enemies; parasitic diseases; failure of water supply; duck disease (Botulism); destruction by crude oil, chemicals, lead poisoning; and destruction on their nesting grounds by climatic conditions.

Crow Is a Growing Menace

Of these, shooting in all its forms and abuses has been so thoroughly discussed in Congress, by conservation groups, and in newspapers and magazines that there is a tendency to minimize the danger incurred from the other factors.

Predators and natural enemies include a number of foes not usually considered as such, and the damage is mainly confined to the nesting season. The enormous increase of the crow (see illustration, next page), is a danger that cannot be overestimated, and this increase is a comparatively recent condition, as is the tremendous increase of range of the coyote during the present century. The last constitutes the most serious menace to some of our largest and finest species, such as the trumpeter swan and whooping crane.

The protective provisions of the Migratory Bird Treaty Act may have to be altered in the matter of such birds as loons and large grebes. Few people realize the enormous number of loons in the West and their destructiveness during the nesting season.

Toll Taken by "Crazy Loon"

Add to this the incredible numbers of the smaller species, especially the Pacific loon along the coast from Mexico to Alaska, and realize that every one of the thousands of loons that you see streaming by hour after hour for days in succession is responsible for the killing of the broods of at least two pairs of ducks, and you can form some idea of the duck destruction that goes on each year unchallenged.

Coots also can be very destructive to downy ducks. A swift peck on the soft little pate is all that is required, and killing is not confined to small ducklings; half-grown birds may be destroyed. Crows, magpies, hawks, horned owls, muskrats, coyotes, pike, turtles, and other creatures not usually regarded as duck destroyers all take their toll during the nesting season.

Second only to the destruction during the nesting season is the loss from the so-called "duck disease," which is not confined to ducks, but destroys every species of water bird as well as many land birds that drink the contaminated water.

By the researches of a few individuals we now know that this disease is not caused by alkali, as first studies seemed to show, but is a food poisoning caused by the toxin from bacterial growth in decaying organic matter. The destruction of waterfowl from this cause in some years in the State of California will far outnumber the total killed by all gunners, and the area affected is spreading. It has reached the prairies of Canada in recent years.

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Regular steamship service connects Oshima with Tokyo, and a submarine cable links the island with the Japanese mainland. Oshima, translated into English, means "big island," hence the popularity of the name in the "Empire of Islands."

Note: Other Japanese references and photographs will be found in the following: "Japan, Child of the World's Old Age" and "Motor Trails in Japan," *National Geographic Magazine*, March, 1933; "Tokyo To-day," February, 1932; "The First Airship Flight Around the World," June, 1930; "Some Impressions of 150,000 Miles of Travel," May, 1930; "Sakurajima, Japan's Greatest Volcanic Eruption," April, 1924; "The Empire of the Risen Sun" and "How the Earth Telegraphed Its Tokyo Quake to Washington," October, 1923; "Some Aspects of Rural Japan," September, 1922; "The Geography of Japan," July, 1921; and "The Making of a Japanese Newspaper," October, 1920.

Bulletin No. 2, February 4, 1935.

Form for Renewal of Bulletin Requests

School Service Department,
National Geographic Society,
Washington, D. C.

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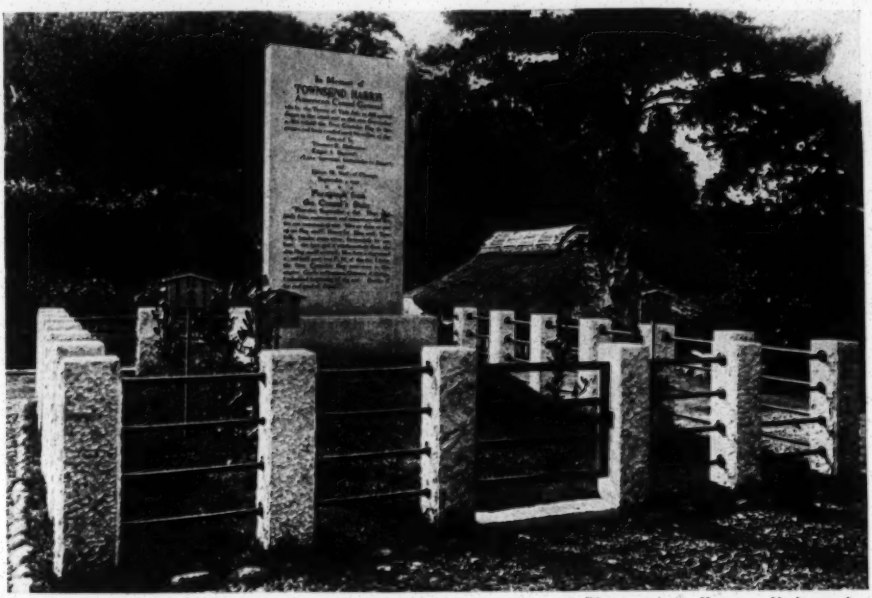

Photograph by Keystone-Underwood

TO THE AMERICAN WHO OPENED JAPAN TO THE WORLD

On the southern tip of Izu Peninsula, almost within sight of Oshima Island, stands this simple stone memorial to Townsend Harris, American consul-general who, by the Treaty of Yedo, July 29, 1858, induced Japan to give up its rôle as The Hermit Nation and enter into world trade. The monument dates from 1927.

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Versailles, Palace of Palaces, Glitters Anew

THE château of Versailles, being restored largely with American money through a grant of the Rockefeller Foundation Fund, is to be further embellished.

Work will begin soon on the famous gardens of Louis XIV, a once beautiful corner of the palace grounds which has become a weed-choked ruin. In the dusty archives of the château 17 plans, recently found, give details of a canal and other features of the early gardens.

While the palace of Versailles is generally conceded to be the ultimate in royal residences, and the yardstick by which magnificence is measured, it may also be said to represent an 18th-century "Public Works Administration project." One of the reasons given by Louis XIV for the construction of the great château and its vast park was that it would give employment to some 30,000 workmen from Paris for several years.

Partly Restored by Napoleon

Built for reasons of state, Versailles soon became the setting of a court so dazzling that many of the French nobility closed their great châteaux in the country and came to take up quarters in a palace that could shelter nearly 10,000 persons. And near the palace, Louis built the Grand Trianon, a glorified marble bungalow, where he could retire from the ceremonies and crowds with which he had afflicted himself.

Left to ruin after France became a Republic, Versailles was partially restored by Napoleon I, five years after he had installed 2,000 of his veterans in the central wing of the palace. But the greater part of the work of transforming Versailles into a museum was done by Louis Philippe, being completed in 1837. Its adaptation into a museum of social and political history has been natural and tasteful.

The great central wing, which is nearly a half mile in length, now houses a unique collection of paintings, sculptures, carvings, and objets d'art. The palace itself was built principally by Mansard, around the hunting lodge of Louis XIII. In reversal of the usual sequence, the palace was built and then the little town grew up. But a year after the removal of Louis XVI and Marie Antoinette to Paris by the mob, the town was so desolate a Russian traveler reports that one could scarcely get a wretched meal.

"All the Glories of France"

The salons and apartments of Louis XIV and his successors form a rich background for the imaginative person who wishes to turn back the clock to the days of the Sun King, and relive the glittering epoch of the Louis. The original furniture and pictures were lost, but the walls, ceilings, paneling, and stucco still reveal the elaborate Louis Quatorze style. The rooms given over to the Historical Museum, founded by Louis Philippe and dedicated to "all the glories of France," contain a collection of pictures and sculpture retelling the history of France through its famous characters, battles, and events.

More than two centuries have passed since the gardens of Versailles astonished the Doge of Genoa and the Ambassador of Siam. Though many features have been destroyed or changed, the gardens are still magnificent. The first design was turned over to Le Nôtre to complete, and it was his genius which created the gardens as they are known to-day. To Le Nôtre were also entrusted the gardens of the

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The main cause of the plague is the congestion of large numbers of birds undisturbed on certain areas of shallow water. It is not generally recognized that the disease disappears shortly after the opening of the shooting season and asserts itself some three weeks after the commencement of the following closed season.

Any arrangement that may provide sanctuaries where waterfowl may congest on areas of shallow water will probably defeat its purpose and become only a death trap that may destroy the birds in millions.

The destruction caused by crude oil is mainly confined to seacoast areas, and its victims are mostly marine ducks and other sea birds. There seems to be a lessening of this terrible evil in recent years, and by proper preventive measures it can be controlled.

Note: Students interested in bird life and conservation problems will find up-to-date references, illustrated with many pictures in full color, in the following: "Shadowy Birds of the Night," *National Geographic Magazine*, February, 1935; "Far-Flying Wild Fowl and Their Foes," October, 1934; "Black Birds and Orioles," July, 1934; "Winged Denizens of Woodland, Stream, and Marsh," May, 1934; "Birds That Cruise the Coast and Inland Waters," March, 1934; "Eagle, King of Birds and His Kin," July, 1933; "Woodpeckers, Friends of Our Forests," April, 1933; "Crows, Magpies, and Jays," January, 1933; "Large Wading Birds," October, 1932; "Wild Life of the Atlantic and Gulf Coasts," September, 1932; "Photographing the Nest Life of the Osprey," August, 1932; "Seeking the Smallest Feathered Creatures," July, 1932; and "Bird Banding, the Telltale of Migratory Flight," January, 1928.

Bulletin No. 3, February 4, 1935.

Photograph by Dr. A. A. Allen

A "PUBLIC ENEMY" OF MIGRATING WATERFOWL

As if it were not enough that it should be heartily disliked by farmers, the American crow has also been blacklisted by birdlovers. The crow destroys eggs and young of many types of duck and other bird life. Crows clustered around a winter water hole at Ithaca, New York.

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The Aleutian Islands, Stepping Stones Across the Pacific

PLANS for maneuvers of the United States fleet among the Aleutian Islands next summer direct world-wide attention to these bleak stepping stones that stretch across the northern Pacific Ocean, from Alaska to within a few miles of Siberian islands off Kamchatka.

The real life story of the Aleutians reads like a page from Jules Verne. There is where islands appear above the surface of the sea one year and disappear the next; where mountain peaks "blow their heads off"; where a woven-grass cigarette case brings fifty dollars; where natives used to make a small fortune hunting sea otters and spend it on a shining Russian samovar; where one of the islands is farther west of Seattle than Eastport, Maine, is east; where, believe it or not, Tuesday is Monday—almost!

Discovered by Russian explorers in the middle of the 18th century, the Aleutian Islands were inhabited by some 25,000 natives—Aleuts, who lived like Eskimos, but looked like Asiatics. Fur bearing animals ran wild on the islands and off their shores.

Hunters Follow Explorers

Hordes of hunters from the mainland of Asia followed the explorers, swooping down on the Aleuts, exploiting, enslaving, killing—in a mad grab for skins. When, in 1867, Russia transferred all its American possessions to the United States, only a thousand-odd Aleuts had survived.

Even to-day, however, a few old Aleut squaws on the island of Attu, farthest *western* point over which the Stars and Stripes wave, weave baskets, bottle covers, cigar and cigarette cases from native grass which command fancy prices in world markets. Government officials report that younger generations are far less skilled than their elders, and it is feared the art will die out with the passing of the old craftswomen.

Twenty-seven hundred miles from Washington State, Attu, in the 180th degree of longitude, is technically in the Eastern Hemisphere. International law, however, stretched a point to include it in the same time system with the other islands of the Aleutian chain. Inasmuch as the International Date Line lies just beyond Attu, airmen flying west plunge directly into another day without the lapse of any time. Hence, a few moments after a Monday take-off they are flying through what to the Eastern Hemisphere is Tuesday.

One Island Is "Jack-in-the-Box"

Volcanic in origin, the Aleutian Islands to-day are studded with conical peaks hiding active and inactive volcanoes. Most interesting, geologically, is Bogoslof, famous for its jack-in-the-box antics. In the period between 1900 and 1907, volcanic eruption caused peaks and detached islands to appear and disappear on and near Bogoslof—Neptune and Nature indulging the quaint game of "Now you see 'em, now you don't."

Once the islands experienced the glamour of boom days—the gold rush to Nome and the Yukon. Dutch Harbor, Unalaska, was an important coaling station for ships plying between Nome and San Francisco. To-day it is on the direct line of the shortest sailing distance between Seattle and Tokyo, and is sometimes visited by merchant ships. Express liners, however, still sail to the south of the Aleutians.

Regardless of a March-like climate—chilly, foggy, damp—Aleuts live a con-

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Trianons. The park and terraces alone cover an area of about six square miles.

Although a playground for plutocrats of the day, Versailles has been a stage for more serious acting. The "Tennis Court" oath of the fighting National Assembly was taken here in 1789.

On September 19, 1870, the victorious Germans, their bands playing, entered Versailles. In January, 1871, King William, surrounded by representatives of all the reigning families of Germany, members of his family, his generals, and his ministers, here established the new German Empire. And in the same Galeries des Glaces in 1918 a defeated German nation signed the Versailles Treaty.

Now restored, in strict accordance with the original plans, this story-book palace will be protected and kept up, it is planned, by the Government itself for future generations.

Note: See also "Armistice Day and the American Battle Fields," *National Geographic Magazine*, November, 1929; "Palace of Versailles," January, 1925; "The World Viewed from the Air," May, 1922; "Our Friends, the French," November, 1918; and "From the Trenches to Versailles," November-December, 1917.

Bulletin No. 4, February 4, 1935.

NOTE TO TEACHERS

Next week's issue of the GEOGRAPHIC NEWS BULLETINS will contain a complete index of articles and photographs published in Vol. XIII, February 19, 1934, to February 11, 1935. This Index is of particular value to students and teachers preparing projects or units of work based upon current events. The Index will contain cross references concerning geographic changes, historic events, industries, costumes, and other data treated in the BULLETINS during the past year.

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WHERE MARIE ANTOINETTE PLAYED AT BEING A MILKMAID

The Petit Trianon, nine or ten rustic cottages around the shore of a small lake, is one of the most beautiful spots within the grounds of the chateau of Versailles. It, too, has recently been restored through American funds. Members of the French court led "the simple life" here, following the publication of Rousseau's popular story "The Village Soothsayer."

tented life. They are forbidden by law to hunt sea otters; this vocation formerly was their greatest source of income. Furs brought fabulous prices—one family might earn as much as $5,000 per season, a fortune in the Aleutians. Beautiful and expensive copperware fascinated them; and of late years their samovars, purchased from Russians, have been in great demand by visitors.

Fox Raising Has Become Industry

Fox farming has taken the place of sea otter hunting. Several of the islands are rented to natives for breeding the blue fox whose soft fur is world famous. Sheep and cattle have been introduced, but the success of the venture is doubtful because of the great distance from markets. It is reported, however, that Aleutian wool is among the finest in the world.

In spite of its natural wonders—the Aleutians have been called "America's Garden of Fireworks"—these North Pacific islands are handicapped in many respects.

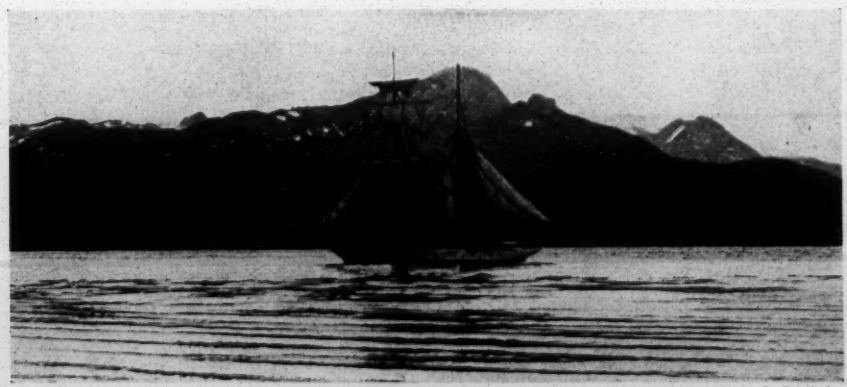
From the point of view of temperature their climate is not bad. Dutch Harbor's mean is 39 degrees, with a low of 30 above zero in January, and a high of 52 in July. The annual rainfall of 63 inches, however, is high.

Much Rain, But No Rivers!

There are some 250 rainy days in the year, which makes the Aleutians one of the rainiest regions in the territory of the United States. Nevertheless, water supplies are limited because there are no great watersheds; no rivers. Vegetables can be grown only under glass. There is no wood on the islands; natives use driftwood and animal oils for heat. Fogs hang over the islands the year around. Gales lash the coasts making anchorage treacherous. There are few good harbors, Dutch Harbor being perhaps the best.

Note: For other material about Alaska, old and new, see also: "'Nakwasina' Goes North," *National Geographic Magazine*, July, 1933; "A World inside a Mountain," September, 1931; "Mapping the Home of the Great Brown Bear," January, 1929; "A Northern Crusoe's Island," September, 1923; "The First Alaskan Air Expedition," May, 1922; "Our Greatest National Monument," September, 1921; "The Camel of the Frozen Desert (Reindeer)," December, 1919; "The Ten Thousand Smokes Now a National Monument," April, 1919; "The Valley of Ten Thousand Smokes," February, 1918; and "A Game Country without Rival in America," January, 1917.

Bulletin No. 5, February 4, 1935.



Photograph by J. P. Ault

FRIENDLY MOUNTAINS SHELTER DUTCH HARBOR

The non-metallic ship "Carnegie" is shown sailing into the best anchorage of the Aleutian Islands. Here the mountains rise straight from the water, cutting off heavy winds, although fog is a constant menace to shipping. The "Carnegie" was later destroyed by fire (November, 1929) at Apia, Samoa.

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